



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification <sup>7</sup> :		A2	(11) International Publication Number:	WO 00/32777
C12N 15/12, C07K 14/435, C12N 15/86, 1/00, 15/82, G01N 33/68, C12Q 1/68			(43) International Publication Date:	8 June 2000 (08.06.00)
(21) International Application Number:		PCT/US99/28351	(81) Designated States: AE, AL, AU, BA, BB, BG, BR, CA, CN, CR, CU, CZ, DM, EE, GE, HR, HU, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, US, UZ, VN, YU, ZA, ARIPO patent (GH, GM; KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).	
(22) International Filing Date:		1 December 1999 (01.12.99)		
(30) Priority Data:		60/110,590 2 December 1998 (02.12.98) US		
(71) Applicant (for all designated States except US): E.I. DU PONT DE NEMOURS AND COMPANY [US/US]; 1007 Market Street, Wilmington, DE 19898 (US).				
(72) Inventors; and				
(75) Inventors/Applicants (for US only): HERRMAN, Rafael [IL/US]; Apartment 405, 3120 Naamans Road, Wilmington, DE 19810 (US). WONG, James, F. [US/US]; 32 Quartz Mill Road, Newark, DE 19711 (US). LU, Albert, L. [CA/US]; 14 Charles Pointe, Newark, DE 19702 (US). PRESNAIL, James, K. [US/US]; 106 Pheasant Hill Lane, Landenberg, PA 19350 (US). LEE, Jian-Ming [CN/US]; 13 Pine Tree Place, West Caldwell, NJ 07006 (US).				
(74) Agent: FEULNER, Gregory, J.; E.I. du Pont de Nemours and Company, Legal Patent Records Center, 1007 Market Street, Wilmington, DE 19898 (US).				

(54) Title: SCORPION TOXINS

SEQ ID NO:17 ..... GLIDVR **C** \* YDSRQ **C** \* WIA **C** \* KKVTGSTQGK **C** \* QNKQ **C** \* R **C** \* Y  
 SEQ ID NO:02 MKILSVLLIAFIICCSINICSEAGLIDVR **C** \* FASRE **C** \* WEA **C** \* RKVTGSGQGK **C** \* QNNQ **C** \* R **C** \* Y  
 1

58

## (57) Abstract

This invention relates to an isolated nucleic acid fragment encoding scorpion toxins that are K-channel agonists. The invention also relates to the construction of a chimeric gene encoding all or a portion of the K-channel agonists, in sense or antisense orientation, wherein expression of the chimeric gene results in production of altered levels of the K-channel agonists in a transformed host cell.